17. Calculate the mean deviation, mean and standard deviation of the following distribution:

Classes	Frequencies
20-40	3
40-80	6
80-100	20
100-120	12
120-140	9
N=	80

18. Draw the percentile chart for the following data

Class Interval	Frequency
10-20	10
20-30	15
30-30	12
40-50	5
50-60	3

19. Compute the Moment coefficient of skewness form the following data:

Marks Obtained	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	6	12	22	24	16	12	08

20. To calculate a Spearman rank-order correlation on data without any ties we will use the following data:

Exam	Marks									
English	56	75	45	71	62	64	58	80	76	61
Maths	66	70	40	60	65	56	59	77	67	63

NOVEMBER/DECEMBER 2025

FACS32/CACS32 — STATISTICAL METHODS AND THEIR APPLICATIONS - I

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Write the scope of statistics.
2. What is Inferential Statistics?
3. Define Median.
4. What is Harmonic Mean?
5. What is Coefficient of Range?
6. Define quartile deviation.
7. Write the formula for Bowley Skewness coefficient?
8. What is skewness?
9. What is the Spearman correlation?
10. What is positive correlation?

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Discuss about the characteristics of Statistics.

Or

(b) Write the limitations of graphical presentation of data.

12. (a) Calculate the mean deviation from the median in respect to the marks obtained by nine students given: 7, 4, 10, 9, 15, 12, 7, 9, 7

Or

(b) If 34 and 16 are the Arithmetic Means and Geometric Means of two positive numbers respectively. Find the numbers.

13. (a) Calculate the SD for the sample data using Actual Mean Method: 2, 4, 8, 6, 10, 12.

Or

(b) Calculate the quartile deviation and coefficient of quartile deviation.

Age in years	10	20	30	40	50	60	70
No. of members	–3	61	160	172	150	40	3

14. (a) Discuss Skewness and its characteristics.

Or

(b) Below is given the IQ scores of 120 students of a class. Calculate the skewness based on Quartiles.

IQ score	50-60	60-70	70-80	80-90	90-100
No. of std.	5	8	10	18	25
IQ score	100-110	110-120	120-130	130-140	
No. of std.	21	19	10	4	

15. (a) Compute coefficient of correlation by Karl Pearson method for the following data :

X:	1800	1900	2000	2100	2200
f:	5	5	6	9	7
X:	2300	2400	2500	2600	
f:	8	6	8	9	

Or

(b) Explain (i) Correlation (ii) Monotonic function (iii) Spearman's correlation coefficient

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SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain in detail with sample diagram (a) Quartile (b) Deciles